

HOYA NEW



Oh There it is !

Hoya cf. imbricata Photos by RDK. On fallen tree on Tonsu Hill, Central Sulawesi
1994

A pdf publication devoted to the Genus
Hoya ISSN 2329-7336

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Editor:
Dale Kloppenburg

Contents

When a species is collected from the wild, I feel it is wise to identify it, propagate it and name it. In this way it will eventually get it into commercial channels, be distributed to all those interested in this genus and thus be preserved. If in the future the species is lost through natural causes or forest destruction it will still be here on earth in your collection.

The following new species are presented in PDF format with ISSN number.

1. **Hoya irisae** Ferreras, Kloppenburg & Tandang
2. **New combination:** Hoya blashernaezii Kloppenburg subsp. **valmayoriana** Kloppenburg, Guevarra & Carandang 2013, coma. nov.
3. **New combination:** Hoya mindorensis Schlechter 1906 subsp. erythrostemma Kerr 1939
4. **Hoya blashernaezii subsp. siariae** Kloppenburg
5. **Hoya tangerina** Kloppenburg, Mendoza & Ferreras
6. **Hoya rima** Kloppenburg, Mendoza & Ferreras
7. **Hoya ralphdavisiana** Kloppenburg, Mendoza & Ferreras

NOTE: please see the Website publication of these species at “www.rare-hoyas.com”. Go to end and click on “publication” to access new species publications.

Hoya irisae Ferreras, Kloppenburg & Tandang

ISSN 2329-7336

Hoya irisae Ferreras & Kloppenburg & Tandang sp nova, Holotypus 254883 (PNH) hic designatus. Isotypes at (CAHUP) and (PUH), similes incoronae structura ad **Hoya linavergarae** Kloppenburg & Siar sed pedicelis longior 0.29 cm x 0.19-0.34 cm contrastre 0.20 x 0.08 cm et sepalo longior 0.30 cm contrastre 0.18 cm longis, sed corolla diametiente complinatis grandior 2.44 cm contrastre 2.0 cm; et coronae lobis longior 0.87 cm contrastre 0.40 cm, differt. Et pollinaria differt.

This species is similar in the coronal structure of *Hoya linavergarae* Kloppenburg & Siar but the pedicels are longer 0.29 cm x 0.18-0.34 cm versus 0.20 x 0.08 cm and the sepals are longer 0.30 cm versus 0.18 cm but the corolla flattened larger 2.44 cm versus 2.00 cm and the lobes of the corona are longer 0.87 cm versus 0.40 cm, their pollinaria are also different. There are many other differences such as leaf morphology and growth habit.

Detailed photomicrographs, measurements and comments are in the following below:



Pedicel: section enlarged ca.13x. The pedicels are terete, glabrous from a ciliate bracteate base (rachis cups) tapering from base to calyx 0.19 cm – 0.34 cm in diameter.

Calyx: below enlarged ca. 10x, the sepals are ovate-elliptic with obtuse apices 0.30 cm long, and 0.25 cm at the widest, ciliate, very finely granulate outside and slick glabrous inside, with a basal overlap of 0.10 cm or 1/3, ligules are present.



Ovaries: do not come attached with calyx when it is removed from the corona, they are glabrous bottle shaped 0.30 cm long and base pair is 0.15 cm wide.



Flower photograph where the lobes are cupped forward with a bulbous base.

This base is 0.75 cm in diameter. The outside is glabrous, inside in base cup near the sinuses there are patchy hirsute cells.

Sinus – sinus	0.48 cm
Sinus – center	0.70 cm
Sinus – apex	1.02cm
Apex – center	1.72 cm
Widest at the sinuses.	

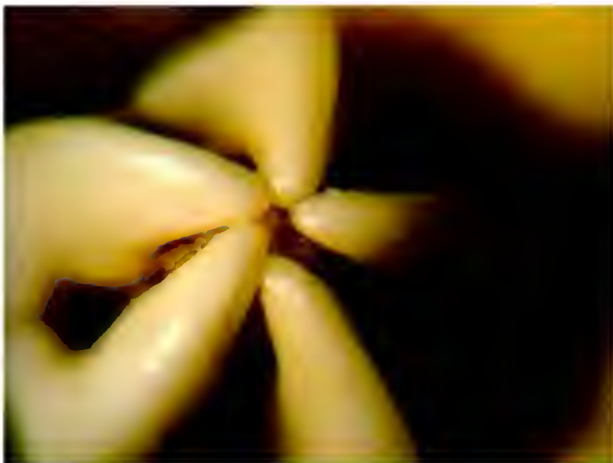


Corolla inside showing the hirsute surface in the bulbous base.

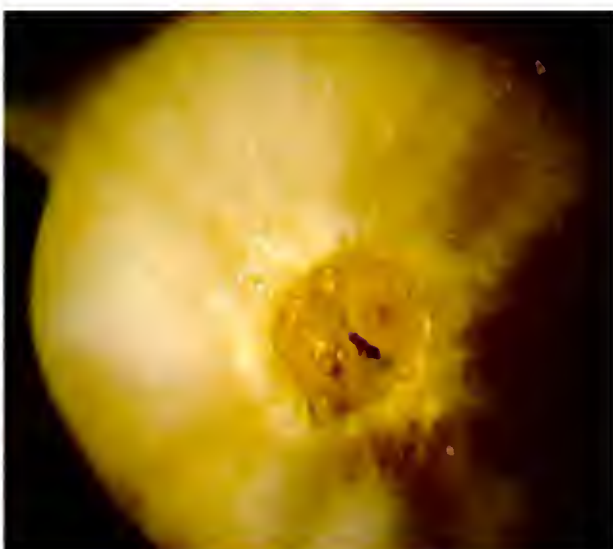


Flower photograph where the lobes are cupped forward with a bulbous base.

Corona enlarged ca. 15x. The corona is upright with lobe bases rounded from a more narrow base and then inner lobes curve over the apex they are 0.32 cm long; at the base 0.15 cm wide the bulbous central area is 0.42 cm wide and 0.32 cm long, tapered base area is 0.20 cm long. So the overall length is 0.87 cm long. Anther wings are narrow and end at the dark central lower triangular area.



Corona: Dorsal view showing the rounder inner lobe apices meeting in the center.



Corona bottom view enlarged ca. 18x, showing the bulbous base and in the center the ovaries still intact not coming loose with the calyx removal.



Pollinarium enlarged ca. 70x.

Pollinia

length 0.85 mm
widest 0.35 mm

Retinaculum

length 0.91 mm
widest 0.07 mm

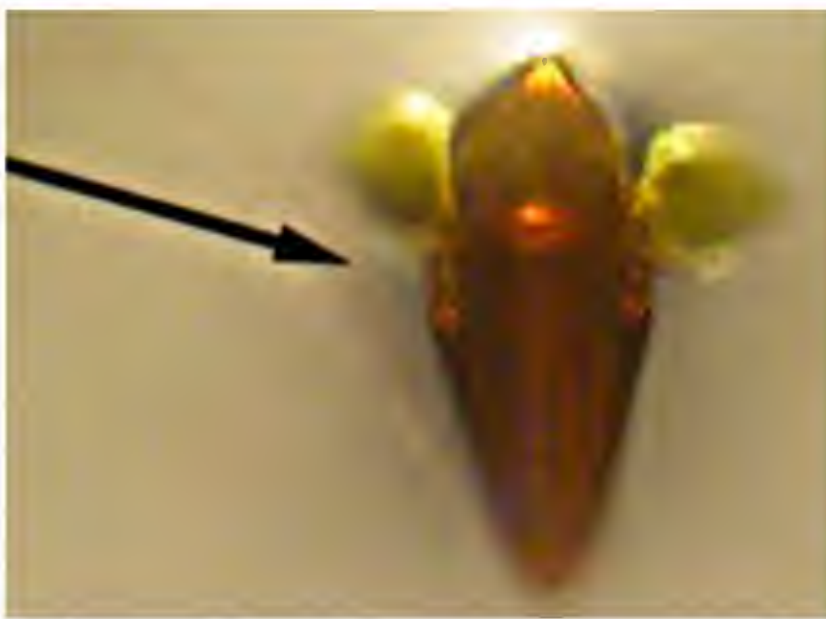
Translator

length 0.21 mm
widest 0.07 mm

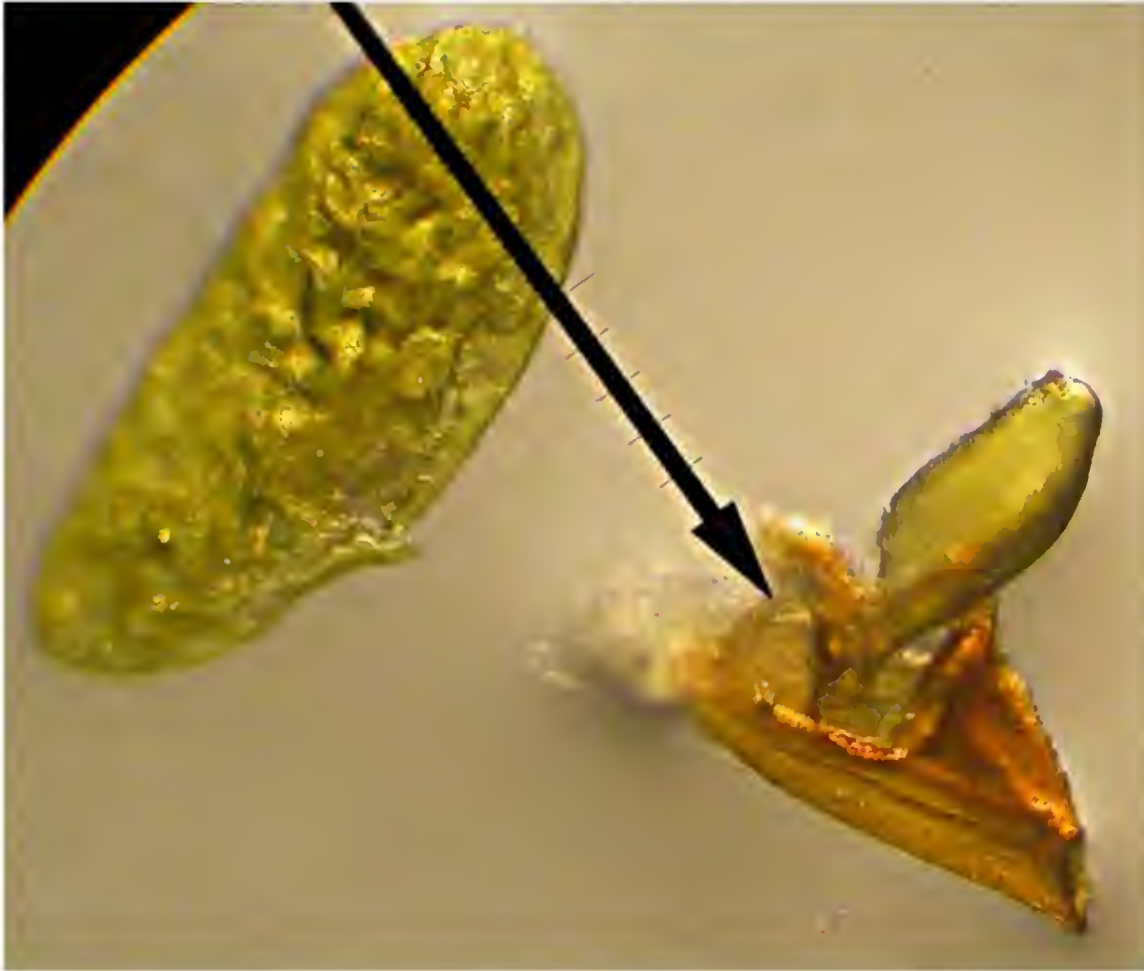
Caudicle

bulb diam 0.15 x 0.20 mm

Translator/caudicle type:
ls/o



More photos of the pollinarium structures, I am unable to determine at this time if the retinaculum has turned on its axis. The right side photo would indicate that it has since at the top it appears there may be extensions.



The pellucid edges to the pollinia are very faint, nevertheless they are present. The pollen grains are large and structured.

To the lower right the retinaculum with the translator and caudicle attached showing how it enters the side of the retinaculum.. (Photo enlarged at ca. 80x.)

Collected by Ulysses Ferreras in the lower montane forests of Pimadek, Municipality of Kasibu, Nueva Vizcaya, Luzon Island, Philippines. Collection number UF 1029.

Altitude: 805 m. asl.

Habitat and Ecology: Residual patch of Tanguile-oak type lower montane forest on a broad ridge. Trees mostly *Shorea polysperma* (Blanco) Merr., *Lithocarpus spp.*, *Cryptocarya sp.*, *Kayea sp.* and *Gordonia luzonica* Vidal.

Hoya irisae Ferreras & Kloppenburg is an epiphytic shrub, not a vine, found growing on decaying tree stumps with some individuals attached to the live trunks of *Shorea polysperma* (Blanco) Merr at ca. 2 meters from the ground.

Etymology: This new Hoya is named after **Iris Flores Caymol**, Ulysses's sister and botanical assistant who helps take care of his specimens and plants at his garden whenever he is away and out in the field.

Measurements:

UF 1029	Leaf 1	Leaf 2	Leaf 3	Leaf 4	Leaf 5	Range
Leaf Length	15.6 cm	12.5 cm	11.5 cm	20.2 cm	8.8 cm	8.8-20.2 cm.
Leaf Width	3.2 cm	2.2 cm	2.0 cm	3.7 cm	1.8 cm	1.8-3.7 cm.
Petiole Length	0.7 cm	0.6 cm	0.4 cm	0.7 cm	0.4 cm	0.4-0.7 cm.

Peduncle length	2.0-4.5 cm.
Stem Diameter	0.4-0.6 cm.



Reduced size copy of the Holotype sheet:



Hoya blashernaezii Kloppenburg **subsp. valmayoriana** Kloppenburg, Guevarra & Carandang 2013, comb. nov. Basionym *Hoya valmayoriana* Kloppenburg Guevarra & Carandang in Jour. Nature Studies 11(1-2): 43, 2013. Holotype 71809 (CAHUP). It was originally collected in the Philippines by David M. Cummings, now living in South Africa, his collection number is DMC 1622. David e-mailed me 23 May 2012 that he and his wife Odette collected this and 7 other hoyas in October 1988, ¾ Km. North of Lake Bulusan, same location as **Hoya davidcunningii** Kloppenburg in Fraterna 2:1995, the distance is from the junction of the main road going along the road towards Lake Bulusan, Sorsogon Province, Philippines in dense forest along roadside, Tyabas, Quezon, Philippines,.

Hoya mindorensis Schlechter **subsp. erythrostemma** 1906. Comb. Nov. Basionym *Hoya erythrostemma* Kerr in Kew Bulletin (1939) 460. (Siam) A. F. G. Kerr. Holotype, Tasan, Kloss, 6909.

Hoya blashernaezii subsp. siariae Kloppenburg ISSN 2329-7336

Hoya blashernaezii subsp. siariae Kloppenburg, subsp. nova. Type #200012 (CAHUP). Similis *Hoya blashernaezii* Kloppenburg 1999, sed, corollae discolor et differt conformatio, corolla diamanteo complanatus brevior 1.48 cm contrastre 1.60 cm; coronae lobus brevior 0.25 cm contrastre 0.32 cm et pollinium brevior 0.39 mm contrastre 0.44 mm, differt.

The new subspecies is similar to *Hoya blashernaezii* but different. The corolla is of a different color also shape (conformation of the corolla) is different and the corolla diameter flattened is smaller 1.48 cm versus 1.60 cm and the lobes of the corona are shorter 0.25 cm versus 0.32 cm also the pollinia are shorter 0.39 mm versus 0.44 mm, among other differences.

This subspecies was collected at Tayabas, Quezon, Philippines. Type material from the UPLB plant breeding program. It is a woody vine, a creeping habit, with opposite lanceolate glabrous, deep green foliage ca. 14 cm long x 3.5 cm wide, tri-ply parallel veined, distinct on the upper surface less so below. Petioles heavy and long, 3.0 cm, diameter 0.09 cm with deep groove on upper side. Internodes 10 - 13 cm rough surfaced, with many adventitious roots, nodes enlarged. Petioles strict, terete, ca. 5 cm long, glabrous.



Side view of a closed flower showing the calyx and pedicel enlarged about 8x. Pedicel is glabrous, 2.6 cm long, terete, 0.10 cm in diameter, rusty pink colored. Calyx is ciliate otherwise glabrous, inside and out, calyx base is rugose. The sepals do not reach the corolla sinuses.



Side view of the calyx and pedicel enlarged about 8x. The pedicel has a few scattered hairs, twisted and bent over. Calyx inside is waxy and glabrous. The two ovaries are short columnar 0.15 cm tall and the base pair 0.10 cm wide.



Calyx top view enlarged about 8x. Sepals are a little overlapped at the base, 0.20 cm long and 0.17 cm at the widest, edges are ciliate, apex narrowly rounded subacute. Small ligules are present at each sinus area



Top view of a flower enlarged about 8x. The corolla lobes do not reach the corolla sinuses. The corolla outside is glabrous, inside campanulate and pubescent. The lobes of the corolla are broad above the sinuses and the apex turns outward (slightly reflexed).

Sinus - sinus	0.45 cm
Sinus - center	0.42 cm
Sinus - apex	0.45 cm
Apex - center	0.74 cm
so corolla diameter flattened is 1.48 cm	
Widest	0.50 cm



Corona top view enlarged about 8x. The inner lobes are narrow and short blunt, outer lobes are narrowly long tapered, raised but turned down at the apical area.

Apex - apex	0.25 cm
Apex - center	0.30 cm
Widest	0.09 cm (very narrow).
Anther wing - aw.	0.14 cm and project outward.
Retinaculum - ret.	0.06 cm
Anther wing - center	0.14 cm



Bottom view of the corona enlarged about 8x. The lobes are grooved but open widely inwardly. The column is long 0.10 cm tall, somewhat thickened.



Pollinarium enlarged. The pellucid edge runs from the outer apex all the way down the outside. The Pollinia are broad and short, translators are short and caudicles small. The retinaculum is relatively large, with broad shoulders and waist areas.

Pollinia

length	0.39 mm
widest	0.29 mm

Retinaculum

length	0.15 mm
shoulder	0.14 mm
waist	0.06 mm
hips	0.10 mm
extensions	0.03 mm

Translators

length	0.15 mm
depth	0.04 mm

Translator/caudicle type: d/o

Caudicle bulb.

diameter	0.06 mm
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Photo from living type plant by Dr. Monina Siar.



Photo of the plant by Dr. Monina Siar

Hoya blashernaezii subsp. siariae Kloppenburg



Hoya tangerina Kloppenburg, Mendoza & Ferreras ISSN 2329-7336

Hoya tangerina Kloppenburg, Mendoza & Ferreras sp. nova. Holotypus 14683 (PUH) hic designatus. Epiphytic, gracilis, volubilis, alte scandens, ramosa; ramis ramulisque filiformibus elongatis, flexuosis, glabris, laxe foliatis, radicanibus; foliis patulis breviter petiolatis, ellipticis acutis vel obtusiusculis. basi sub-cuneatis, glabris, hebus, 5.7 - 9.7 cm longis, medio fere 3.1 - 3.7 cm latis, petiolo crassiusculo 1.2 - 1.7 cm longo, glabro; cymis umbelliformibus, graciliter pedunculatis, 25 - 35 floris, pedunculo tereti glabro 2.0 cm longo, pedicellis filiformibus 0.4 – 1.0 cm longis; calycis segmentis oblongis btusis glabris 0.13 cm longis; corolla revoluta c. 1.04 cm diametiente complanatus, 5-lobata, extus glabra, intus pubescena; coronae lobus apicem et dorsum versus adscendentibus, superne elliptico-lanceolatis antice breviter spathulatis, subtus caniculatus; antheris trapezoideis, appendice hyalio ovato; polliniis oblique oblongoideis 0.31 mm longus.

Epiphytic, slender, twining, lofty climber, branched, branches rebranched, threadlike elongated, flexible, glabrous, loosely leaved, rooting; leaves shortly petioled, spreading, lanceolate-elliptical acute or somewhat obtuse, base cuneate, glabrous, lucid, texture thick leathery, 5.7 - 9.7 cm long, in the middle almost 3.1 - 3.7 cm wide. Petiole somewhat thicker 1.2 - 1.7 cm long, glabrous; cymes shaped like umbels, slenderly pedunculate, 25-35 flowered, peduncle round, glabrous, 2.0 cm long, pedicels threadlike 0.4 – 1.0 cm long; segments of the calyx oblong obtuse, glabrous, 0.13 mm long; corolla revolute, 1.04 cm in diameter flattened, 5 lobed, outside glabrous, inside pubescent, lobes of the corona with the apexes and back ascending, above elliptic-lanceolate with the front shortly spathulate, below channeled; anthers trapezoid, appendages ovate, hyaline; pollinia obliquely oblong 0.31 mm long. In contrast to *Hoya obscura* the sepals her are not round (0.15 x 0.15 cm) but triangular 0.13 x 0.06 cm, also the corolla here is larger flattened 1.04 cm versus 0.7 cm. The foliage here is more uniform and the petioles are longer and here not channeled among other differences.



Peduncle not shown here is terete, glabrous, enlarged slightly as it nears the rachis, 0.16 cm in diameter.

Rachis, bracteate semi-circular 0.60 cm long and 0.04 cm in diameter, bracts whorled.

Pedicel: curved, terete, glabrous here enlarged ca. 13x, it is 0.4-1.0 cm long and 0.04 cm in diameter.



Calyx: and ovaries on pedicel enlarged ca. 33x the sepals are granulate glabrous outside, slick glabrous inside, ciliate with some basal overlap, apex sub-obtuse, no ligules observed, 0.13 cm long and 0.06 at the widest.

Ovaries: columnar, glabrous with lip-like apices, 0.10 cm long and base pair 0.07 cm wide.



Ventral (back) of a preserved flower enlarged ca. 11x, sepals here shown with granulate surface, thickened down the center, with rounded apices, corolla surface here glabrous. Corolla is revolute.



Corolla: dorsal surface enlarged as above, this surface is pubescent except for a large portion of the lobe apices.

Sinus – sinus	0.26 cm
Sinus – center	0.23 cm
Sinus – apex	0.30 cm
Apex – center	0.52 cm
Widest	0.30 cm



Corona: ventral view enlarged ca. 20x. This is a bilobed species bi-lobes form a channel here with rounded inner lobes, central column is short, with bulbous protrusions surrounding it, all surfaces glabrous. Anther wing apices protrude only slightly and are thick rounded.



Dorsal section of the corona enlarged ca. 20x, The inner lobe does not reach the center they are somewhat terete, and anthers are acute and this in center, two retinacula show here as dark spots about even with the corona inner lobe apex (center left). Bilobes start opposite the retinacula have sulcate surfaces; shelf like and meet vertically at the outer apex.



Corona dorsal view enlarged ca. 16x, the anther wings are very prominent with rounder wide sides.

Apex – apex	0.18 cm
Apex – bi-lobe end	0.22 cm
Bi-lobe –center	0.28 cm
Ret. – ret.	0.04 cm
Ret. – center	0.04 cm
Aw. - aw.	0.15 cm
Aw. – center	0.18 cm



Dorsal view of a coronal lobe enlarged ca. 24x, coronal lobe is elongate diamond shaped with a slight concave surface, inner lobe comes to a tapered rounded end about even with the retinacula (dark spots), anthers in center (here lighter in color) are acute. exposed and twisted.





Pollinarium enlarged ca. 160x.

Pollinium

length	0.31 mm
widest	0.13 mm

Retinaculum

length	0.06 mm
shoulder	0.06 mm
waist	0.04mm
hip	0.06 mm
ext.	0.04 mm

Translator

length	0.13 mm
depth	0.03 mm

Caudicle

top cup	0.07 mm
length	0.07 mm

Translator/caudicle type: fb/cw

Leaves: opposite, petiolate, lax, elliptic to obovate, slightly undulate edges, pinnate nervation, base sub cuneate, apex apiculate, dull glabrous, nerve angle to midrib ca. 27°.

Leaf measurements by George Mendoza:

	Leaf length	leaf widest	petiole length
1.	9.7	3.7	1.7
2.	7.8	3.3	1.7
3.	7.3	3.5	1.5
4.	6.5	3.1	1.3
5.	5.7	3.1	1.2

Range: 5.7-9.7 3.1-3.7 1.2-1.7

Umbel flat: ca. up to 35 flowers.

Stems with adventitious roots.



Photos of living plant by George Mendoza.





Contributors:

Ulysses Ferreras, botanist, plant collector, plant taxonomist.

Dale Kloppenburg, retired: Graduate UC Berkeley, plant genetics, Lt. USNR, Plant Breeder and Research Agronomist, now taxonomist of Genus Hoya.

George Mendoza, Landscape Artist, Nurseryman and Plant Explorer from Quezon City, Philippines, visit his web site www.forest-treasures.com.

Collected at Polillo Island, Quezon Province, Philippines by George Mendoza et al.
Photos: DSC 7325-7335. Collection number GM #36

Reduced copy of the type sheet



Hoya rima Kloppenburg, Mendoza & Ferreras

ISSN 2329-7336

Hoya rima Kloppenburg, Mendoza & Ferreras sp. nova, holotypus 14680 (PUH) hic designatus. Section Acanthostemma (Blume) Kloppenburg. Similis *Hoya wayetii* Kloppenburg 1993, sed differt. Foliis anguste lanceolatis acuminatis glabris, basi et apice attenuates acutis, utrinque glabrous, 9.8-11.9 cm longis et 2.5-2.8 cm latis, petriolatis; umbelis paucifloris, ca. 12-15 florum. Subfrutex vel pendulus, epiphytus, ramos scandens, rami, filiformis, flexuosa. Calycis segmentis ovatis, ciliatis, 0.12 cm longis, corolla 5-fid revoluta, exitis glabra intus papillatis tvel usa subtiliter puberulus sed villous ad sinuses, 1.0 cm diametro complanatus. Coronae lobis 0.16 cm longa, sine lobis interior et cum dorsum rima.

This new hoya species is a bilobed species in the Section Acanthostemma and most similar to *Hoya wayetii* Kloppenburg 1993 in foliage. The leaves are narrowly lanceolate acuminate and glabrous 9.8-11.9 wide and 2.5-2.8 wide, the base and apex are acute, with about 12 – 15 flowers in a cluster. The sepals are nearly round with fine ciliate edges 0.12 cm long, with a 5 lobed corolla, glabrous outside and inside, papillate to very finely puberulous but villous at the sinuses; the diameter flattened is 1.0 cm. The coronal lobes are 0.16 cm long with no inner lobe and the dorsal is **creased**, thus the Latin name “rima” .

Details and photos of parts follow:



Pedicel: enlarged ca. 33x, it is curved, terete, glabrous, 1.4 cm long and 0.09 cm in diameter. With about 10 flowers per cluster.



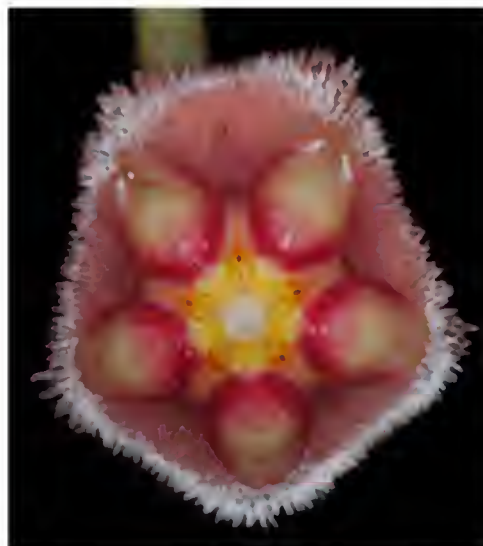
Calyx: enlarged ca. 22x, the sepals are nearly round with finely ciliate edges, basal overlap and no ligules seen. Sepals are 0.12 cm long and 0.12 cm widest, do not reach sinuses.

Ovaries: are glabrous columnar with flat apices, 0.15 cm tall and base pair 0.06 cm wide.



Corolla: ventral surface enlarged ca. 12x. This surface is glabrous, cut about half way, is revolute.

Sinus – sinus	0.27 cm
Sinus – center	0.25 cm
Sinus – apex	0.36 cm
Apex – center	0.50 cm
Widest	0.26 cm



Corolla dorsal surface, left from preserved flower and right by George Mendoza of live flower, this surface is papillate to very finely puberulent but with villous cells at the sinuses, apical area (0.18 cm) is glabrous.



Corona: ventral view enlarged ca. 14x, the surfaces are glabrous, essentially no central column the opening is 0.10 cm in diameter and surrounded with bulbous protrusions. Lobes are channeled and very finely diagonally sulcate; edges are evenly rounded. Anther wing apices not extended from the sinuses, with rounded ends.

Apex – apex	0.16 cm
Apex – center	0.24 cm
Apex – bi-lobe apex	0.29 cm
Widest	0.10 cm
Ret. - ret./ret. - center	0.05 cm
Aw. - aw	0.15 cm
Aw. – center	0.10 cm



Corona dorsal view, enlarged as above, left preserved material right from living material. Lobes are bi-lobed that begin near inner lobe apex extending centrally as the anthers leaving the impression that the

inner coronal lobe might be acute spatulate, inner lobe however is actually blunt and occasionally mucronate at tip.



Side view of a coronal scale, the dorsal is convex with rounded sides and outer apex, the Anther wings are finely linearly sulcate and edges are rounded with a slight curve (left bottom to center) central area is exceedingly thick and proportionately large. Inner lobe is stubby, well below the long central anthers.



Dorsal view of a coronal lobe, pollinaria are well in toward the coronal center, retinacula are even with the inner lobe apex, scale in nearly diamond shaped tapering to a blunt apex surrounded by rather prominent bi-lobes.

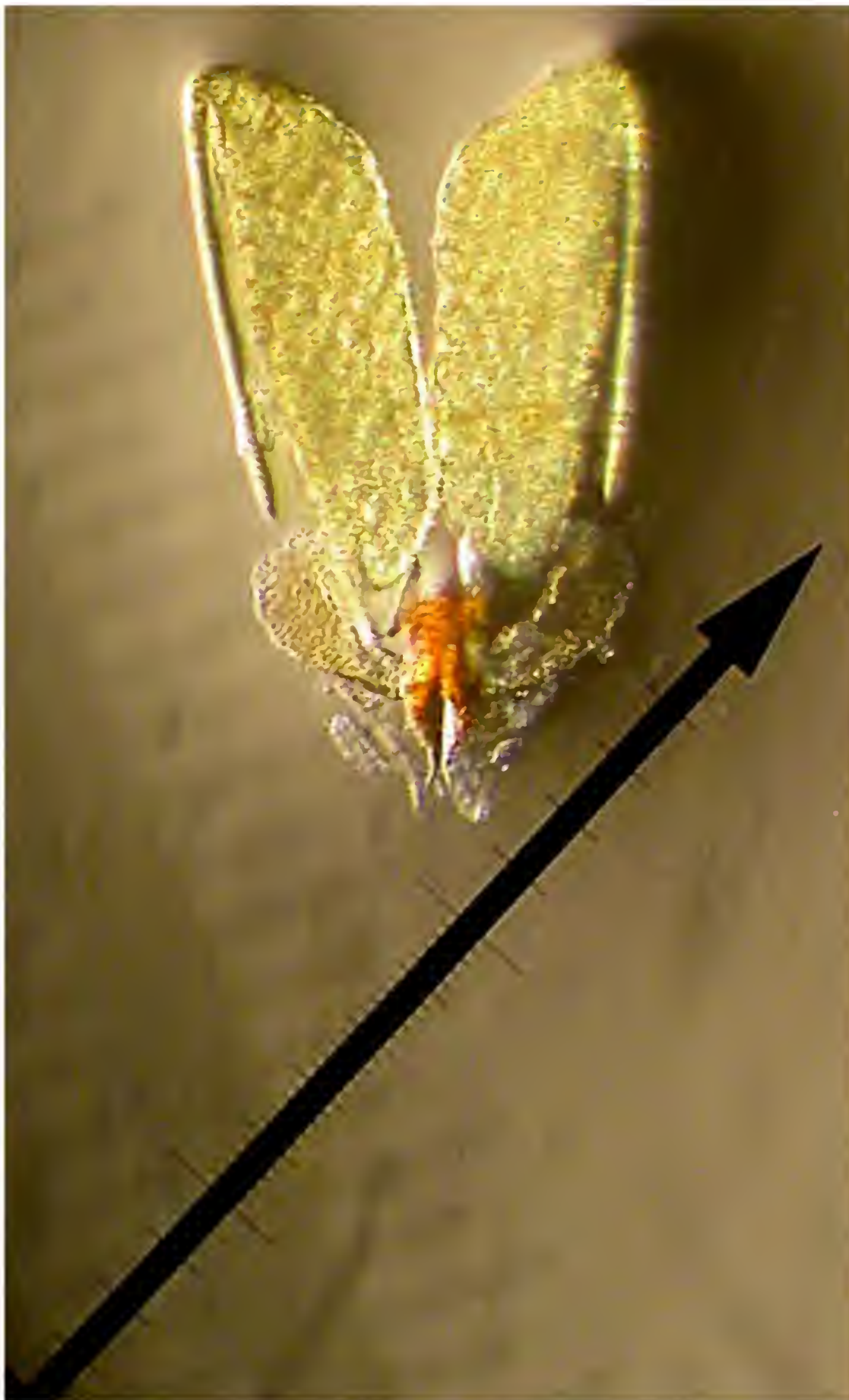


Dorsal surface of the coronal scales enlarged ca. 31x, the dorsal convex surface of the scales are creased from the center toward the inner lobe apex, bi-lobes begin inward of the inner lobe apex (as does the anther wing), between the pollinia. Note the thickened anther wings proceeding between the two adjacent Pollinaria to an acute apex.



Side view of a coronal scale, upper left is the thin translucent anther and at its base to the right a smooth curved edge of the anther wing, and just above is the same color bi-lobed edge; above this is the finely sulcate surfaced coronal lobe (dorsal, here convex) with a small raised bump forward near its inner apex (slightly

darker in color) This whole structure is unique. I have never observed it in another hoyia species.



Pollinarium enlarged 170x.

Pollinia:

length 0.37 mm
widest 0.14 mm

Retinaculum:

length 0.08 mm
shoulder 0.07 mm
waist 0.04 mm
hip 0.06 mm
extensions 0.06 mm

Translator:

length 0.14 mm
widest 0.04 mm

Caudicle:

bulb diam. 0.06 mm

Translator/caudicle Type:

fb/cw

Leaves: petiolate, opposite, glabrous, narrow linear dorsal deep concave, thick, enervis, base cuneate apex acute; edges darker green, below much more pail colored.

1) Length: 11.9	Width: 2.8 cm	petiole length: 2.7
2) " 11.3	" 2.5	" " 2.6
3) " 11.1	" 2.6	" " 2.4
4) " 11.0	" 2.6	" " 2.5
5) " 9.8	" 2.6	" " 2.4

Range: 9.8-11.9

2.5-2.8

2.4-2.7

References:

1. **Hoya wayetii** Kloppenburg in Fraterna, International Hoya Association 2 (1993) 9-10.

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Dale Kloppenburg, retired: Graduate UC Berkeley, plant genetics, Lt. USNR, Plant Breeder and Research Agronomist, now taxonomist of Genus Hoya.

George Mendoza, Landscape Artist, Nurseryman and Plant Explorer from Quezon City, Philippines, visit his web site www.forest-treasures.com.

Collected by George Mendoza et al at Catanduanes, Bicol, Philippine. Collection #, GM 72.

Pictures from George Mendoza, DSC 7428-7454/0263-0286



About 11 flowers per cluster.





One of the photos above greatly enlarged to show the inner lobe structure, note the dark red spot at the apex of the inner lobe apex a raised small mucronate protrusion, it is difficult to say where the inner lobe and inner bi lobes begin or separate, they appear to fuse together at the internal central ends.

Reduced copy of the type sheet



Hoya ralphdavisiana Kloppenburg, Mendoza & Ferreras ISSN 2329-7336

Hoya ralphdavisiana Kloppenburg, Mendoza & Ferreras sp nova, holotypus 14681 (PUH) hic designatus. This new species is named for Ralph Davis, a member for years of the West Coast Hoya Society, an avid grower of the Genus, who over the years had supplied me with hoya specie seed pods with the flower attached, for analysis and study the setting of seed pods, also for growing seedlings. Sp. similes e. *Hoya marquesii*, *Hoya coronaplana* (awaiting publication) et *Hoya fitchii* sed differt ab aliquat signis. Similis *Hoya pubicalyx* cum copolla dorsalis papillatus sed calyx non pubescens.

This species is similar in several ways to other hoya species namely *Hoya marquesii*, *Hoya coronaplana* (still to be published) and *Hoya fitchii* but differs from all in a number of characters so can not be placed as a subspecies of any of these, it is like *Hoya pubicalyx* in having an inner corolla surface that is papillate except here the calyx is not pubescent among other differences.

See detailed measurements and photos following:



Pedice: on floret ventral view enlarged ca. 6x, the pedicels are terete, glabrous, slightly curved, 0.14 cm long and 0.06 cm in diameter. Calyx base is bulbous with a granulate surface.



Calyx: dorsal view enlarged ca. 17x, the sepals are finely granulate outside glabrous inside, 0.15 cm long and 0.10 cm at the widest, basal overlap of 0.05 cm. Ligules at the sinuses.

Ovaries: are columnar, 0.3 cm long and base pair 0.09 cm wide the apex is flat with a small protrusion at the centers. The edges are finely ciliate.



Corolla: dorsal surface enlarged ca. 7x, the surface is finely papillose, ventral is glabrous. At anthesis it is rotate with lobe edges roller under slightly.

Sinus – sinus	0.33 cm
Sinus – center	0.25 cm
Sinus – apex	0.46 cm
Apex – center	0.65 cm
Widest	0.40 cm



Corona: ventral surface enlarged ca. 11x, The lobes are channeled with rolled edges diagonally sulcate the anther wing apices are square and protrude 0.02 cm from the lobe sinuses. Central column is short, 0.10 x 0.08 cm in diameter, surrounding surface is glabrous.



Corona: sideways view enlarged as above, the column is more visible ca 0.03 cm long and also the protruding anther wings with their squared off ends. Lobe apices are acute.



Corona: dorsal surface enlarged as above, it is horizontal, the inner lobes are short dentate and do not reach the center, Dorsal is slightly concave with broad rounded edges, and a low rounded central keel. Outer lobe is sub-acute.

Apex – apex	0.31 cm
Apex- center	0.35 cm
Ret. – ret./center	0.09 / 0.07 cm
Aw. – aw. / center	0.20 / 0.15 cm



Pollinarium enlarged 160x.

Pollinium

length	0.43 mm
widest	0.18 mm

Retinaculum

length	0.15 mm
shoulder	0.15 mm
waist	0.07 mm
hip	0.10 mm
ext.	0.07 mm

Translator

length	0.11 mm
widest	0.03 mm

Caudicle

bulb diam.	0.05 mm
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Caudicle is clear
Pollinia ends are tapered.

Translator/caudicle type:
ls/o

Collected by George Mendoza et al at Mt. Tagumpay, Quezon Province, Luzon, Philippines. Altitude 500m. asl, mild fragrance. All photos are from living plants taken by George Mendoza except the pollinarium.

Leaves: opposite, petiolate, broadly elliptic, ply-nerved about 3 –pairs, slightly lighter than the leaf upper surface, base sub-obtuse, apex acuminate, edges somewhat undulant.

Leaf measurement: in centimeters.

	length	width	petiole length
1.	13.2	3.9	2.1
2.	12.5	3.9	1.1
3.	11.4	3.5	1.3
4.	9.0	3.7	1.2
5.	8.3	3.5	1.2
Range	8.3-13.2	3.5-3.9	1.2 -2.1



About 8 flowers per cluster.

Contributors:

Ulysses Ferreras, botanist, plant collector, plant taxonomist.

Dale Kloppenburg, retired: Graduate UC Berkeley in Plant Genetics, Lt. USNR, Plant Breeder and Research Agronomist, now taxonomist of Genus Hoya.

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Reduced cop[y of the type sheet

